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MEMORANDUM FOR THE DIRECTOR OF ADVANCED RESEARCH PROJECTS AGENCY

SUBJECT: Intelligence Requirements for SENTRY

1. Reference is made to the memorandum, subject: Intelligence Requirements for SENTRY dated 10 November 1958 and subsequent discussions with representatives from your office regarding reprogramming of Project SENTRY.

2. The highest priority intelligence need during the foreseeable future will continue to be intelligence related to warning of the Soviet air offensive threat. Project SENTRY's development and operational employment should be directed towards achieving a maximum return of intelligence bearing on the warning problem. To assist in project planning, the following breakdown by time periods will provide more explicit guidance in regard to the relative priority of the various collection capabilities inherent in the SENTRY program:

a. 1959-1960 Time Period - Based on present national estimates, Soviet ICBM operational deployment will be taking place during this period. Considering the relative state of development of the several SENTRY sensor systems, it is our judgment that photo coverage of the entire Soviet Bloc represents the most urgent requirement. In order to identify missile sites during the construction period and provide information concerning the size and nature of the Soviet ICBM force it will be necessary to have periodic photographic coverage of most of the Soviet Bloc with ground resolution of 20 feet or less (identification of mobile or transportable units may require ground resolutions of 10 feet or less). Initial coverage should be accomplished by mid-1959 and repeated at intervals of approximately 6 months through 1960 to meet the minimum requirement for comprehensive photo coverage of the Soviet Bloc four times during the critical construction and deployment phase of the Soviet missile program. High priority should be placed on ELINT coverage to be conducted in conjunction with the photo mission. In this respect the first emphasis should be placed on a general coverage of the electronics spectrum associated with

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[redacted] and warning capability should proceed on a highest priority basis during this period. The operational need for early warning which may be derived from IR will become the highest priority intelligence requirement as the Soviet ICBM force develops in strength and reliability to a point where it assumes the proportions of a direct and immediate threat. In this connection, identification and location of the Soviet operational missile force by means of photography should contribute to the usefulness of the IR warning system when it becomes operational.

b. 1961-1962 Time Period - During this period the operational infra-red warning requirement will assume ascendancy over visual photography as the highest priority. Emphasis on the research and development program for the infra-red during the preceding period should have been directed towards the achievement of a fully reliable infra-red operational system by the beginning of calendar year 1961 or earlier. Photography during this period will be needed on a selective basis with ground resolutions of 20 feet or less. The photo system should be capable of obtaining coverage and readout within 24 hours on selected objectives anywhere within Soviet territory. Research and development should continue towards the development of a photographic capability which will provide ground resolutions of 5 feet or less and which will have greater operational flexibility capable of obtaining timely coverage of selected objectives anywhere within the Soviet Bloc. Development of the ELINT system should parallel photography in regard to flexibility and selectivity. The readout and processing capability for both photography and ELINT must be as effective as that of the airborne sensors so as to provide for a means of rapid processing and dissemination of the end products.

3. The above statement of requirement has been coordinated with Central Intelligence Agency and is fully concurred in by that agency.

[redacted], USAF
Asst Dep Chief of Staff,
Intelligence

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